```
     FILE 'WPIX, HCAPLUS' ENTERED AT 16:43:36 ON 20 SEP 2004
L1        395725 SEA ABB=ON  PLU=ON  PHOTOSENS###### OR PHOTODETECT####### OR
                 (PHOTO OR LIGHT)(2A)(DETECT##### OR SENS### OR MONITOR##### OR
                 METER#### OR MEASUR#######) OR PHOTOMET? OR LIGHTMETER? OR
                 MEASUR#####(3A)(INTENSIT##### OR LUMINOS##### OR LUMINANC#####
                 OR ILLUMIN######## OR LUMEN#### OR LUMIN########)
L2         62558 SEA ABB=ON  PLU=ON  L1 AND (EL OR ELECTROLUM#### OR LAMP OR
                 LIGHT SOURCE OR LIGHTSOURCE OR LED OR LIGHT(2A)(EMIT OR
                 EMITT#### OR EMISS#####))
L3         22753 SEA ABB=ON  PLU=ON  (INDIUM TIN OXIDE OR ITO)(2A)(FILM OR
                 LAYER## OR MEMBRAN#### OR COAT#### OR ELECTRODE OR CONDUCT####)
                  OR (UPPER OR TOP OR TRANSPAREN####)(2A)(ELECTRODE OR CONDUCT##
                 ##) AND (EL OR ELECTROLUM#### OR LAMP OR LIGHT SOURCE OR
                 LIGHTSOURCE OR LED OR LIGHT(2A)(EMIT OR EMITT#### OR EMISS#####
                 ))
L4         12240 SEA ABB=ON  PLU=ON  L1 AND (LUMINESC##### OR PHOSPHOR OR
                 PHOSPHORESC#####)
L5          3087 SEA ABB=ON  PLU=ON  L1 AND (ORGANIC OR POLYMER### OR PLASTIC)(2
                 A)(LIGHT OR DEVICE OR EMITT#### OR LED)
L6         12240 SEA ABB=ON  PLU=ON  L1 AND (LUMINESC##### OR PHOSPHOR OR
                 PHOSPHORESC#####)
L7         36539 SEA ABB=ON  PLU=ON  (PHOTOSENS#### OR SENSING OR DETECTING OR
                 DETECTION OR PHOTODETECT##### OR SENSOR OR DETECTOR)(3A)(TOP
                 OR UPPER OR ELECTRODE)
L8         71782 SEA ABB=ON  PLU=ON  L2 OR L4
L9           439 SEA ABB=ON  PLU=ON  L3 AND L8
L10           35 SEA ABB=ON  PLU=ON  L9 AND L7
L11           25 SEA ABB=ON  PLU=ON  L10 AND TRANSPAREN########
L12            2 SEA ABB=ON  PLU=ON  L10 AND WINDOW######
L13            2 SEA ABB=ON  PLU=ON  L10 AND WINDOW
L14            0 SEA ABB=ON  PLU=ON  L10 AND CLEAR
L15            1 SEA ABB=ON  PLU=ON  L10 AND TRANSLUCEN######
L16           25 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L13 OR L14 OR L15)
L17            4 SEA ABB=ON  PLU=ON  L16 AND TOP
L18            7 SEA ABB=ON  PLU=ON  L16 AND UPPER
L19            0 SEA ABB=ON  PLU=ON  L16 AND ANODE
L20            3 SEA ABB=ON  PLU=ON  L16 AND CATHODE
L21           11 SEA ABB=ON  PLU=ON  (L12 OR L13 OR L14 OR L15) OR (L17 OR L18
                 OR L19 OR L20)
L22         8603 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR
                 L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR
                 L17 OR L18 OR L19 OR L20 OR L21) AND (TOP OR TOPMOST OR
                 UPPER######)(4A)(CONDUCT##### OR ANODE OR CATHODE OR ELECTRODE
                 OR ITO OR INDIUM OR TRANSPAREN###### OR FILM OR LAYER OR
                 PLATE)
L23           67 SEA ABB=ON  PLU=ON  L5 AND L22
L24           91 SEA ABB=ON  PLU=ON  L9 AND L22
L25            9 SEA ABB=ON  PLU=ON  L16 AND L22
L26           16 SEA ABB=ON  PLU=ON  L23 AND L24
L27           14 SEA ABB=ON  PLU=ON  (L25 OR L26) NOT L21

     FILE 'HCAPLUS' ENTERED AT 17:03:58 ON 20 SEP 2004
                 E PHOTOMETERS/CT
L28        68651 SEA ABB=ON  PLU=ON  PHOTOMETERS/CT OR "EXPOSURE METERS"/CT OR
                 PHOTOMETER OR LIGHTMETER OR LIGHT(3A)(MEASUR######## OR
                 METER###### OR INTENSITY OR LUMINANCE OR LUMINOSITY)
L29        11029 SEA ABB=ON  PLU=ON  PHOTODETECTOR OR PHOTOSENSOR
L30        79077 SEA ABB=ON  PLU=ON  (L28 OR L29)
L31         1178 SEA ABB=ON  PLU=ON  L30 AND ELECTROLUMINESCENT

     FILE 'REGISTRY' ENTERED AT 17:06:01 ON 20 SEP 2004
L32            1 SEA ABB=ON  PLU=ON  ITO/CN

L33        16812 SEA ABB=ON  PLU=ON  L32
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L34        126 SEA ABB=ON  PLU=ON  L31 AND ( L33 OR ITO OR INDIUM TIN OXIDE)
L35         84 SEA ABB=ON  PLU=ON  L31 AND TRANSPARENT
L36          2 SEA ABB=ON  PLU=ON  (L34 OR L35) AND UPPER########
L37          7 SEA ABB=ON  PLU=ON  (L34 OR L35) AND TOP
L38          0 SEA ABB=ON  PLU=ON  (L34 OR L35) AND TOPMOST######
L39         25 SEA ABB=ON  PLU=ON  (L34 OR L35) AND (PHOTO OR LIGHT OR
               SENS### OR DETECT#### OR PHOTOSENS? OR PHOTODETECT#########)(3A)
               (ELECTRODE OR CATHODE OR ANODE)
L40          0 SEA ABB=ON  PLU=ON  L36 AND OLED
L41          0 SEA ABB=ON  PLU=ON  L36 AND ORGANIC
L42          0 SEA ABB=ON  PLU=ON  L36 AND POLYMER########
L43          0 SEA ABB=ON  PLU=ON  L36 AND RESIN###
L44          0 SEA ABB=ON  PLU=ON  L36 AND PLASTIC###
L45          0 SEA ABB=ON  PLU=ON  L36 AND PLED
L46        124 SEA ABB=ON  PLU=ON  (L34 OR L35) AND (OLED OR PLED OR ORGANIC
               OR POLY OR POLYMER#### OR PLASTIC## OR RESIN####### OR HOMOPOLYM
               ER###### OR COPOLYMER##### OR MONOMER###)
L47         19 SEA ABB=ON  PLU=ON  L34 AND L35
L48         12 SEA ABB=ON  PLU=ON  L46 AND L47
L49          7 SEA ABB=ON  PLU=ON  L21 OR L27
L50         48 SEA ABB=ON  PLU=ON  (L36 OR L37 OR L38 OR L39) OR (L47 OR L48
               OR L49)
L51         41 SEA ABB=ON  PLU=ON  L50 NOT L49
L52         31 SEA ABB=ON  PLU=ON  L51 AND (UPPER####### OR TOP##### OR
               ELECTRODE##)
               D ALL TOT
L53         10 SEA ABB=ON  PLU=ON  L51 NOT L52
L54          7 SEA ABB=ON  PLU=ON  L53 AND (ELECTRODE OR PLATE OR CATHODE OR
               ANODE)
L55         10 SEA ABB=ON  PLU=ON  (L53 OR L54)
               D ALL TOT
L56          0 SEA ABB=ON  PLU=ON  (L34 OR L35) AND INTRINSIC
L57          7 SEA ABB=ON  PLU=ON  (L34 OR L35) AND N TYPE
L58          7 SEA ABB=ON  PLU=ON  (L34 OR L35) AND P TYPE
L59         34 SEA ABB=ON  PLU=ON  (L34 OR L35) AND (SANDWICH######## OR
               STACK######## OR LAMINA######## OR MULTIL######## OR INTERL########
               ## OR INTERP########)
L60          1 SEA ABB=ON  PLU=ON  (L57 OR L58) AND L59
               D ALL
L61         32 SEA ABB=ON  PLU=ON  (L57 OR L58 OR L59) AND (INTENSITY OR
               LUMINOSITY OR ILLUMIN######### OR LUMINAN########)
L62         31 SEA ABB=ON  PLU=ON  L61 NOT L60
L63          4 SEA ABB=ON  PLU=ON  L62 AND (?METER? OR MEASUR?)
L64          4 SEA ABB=ON  PLU=ON  L62 AND (?METER? OR ?MEASUR?)
L65         41 SEA ABB=ON  PLU=ON  L52 OR L55
L66         15 SEA ABB=ON  PLU=ON  L53 OR L64 OR L60
L67          0 SEA ABB=ON  PLU=ON  (L63 OR L64) NOT L66
L68         42 SEA ABB=ON  PLU=ON  L60 OR L65
L69          4 SEA ABB=ON  PLU=ON  L64 NOT L68
               D ALL TOT
L70         32 SEA ABB=ON  PLU=ON  LUMINAN########(L)ELECTRO
L71         32 SEA ABB=ON  PLU=ON  L70 NOT (L69 OR L68)
L72          0 SEA ABB=ON  PLU=ON  L71 AND UPPER
L73          0 SEA ABB=ON  PLU=ON  L71 AND TOP
```

STIC Search Results Feedback Form

EIC 2800

Questions about the scope or the results of the search? Contact ***the EIC searcher or contact*:**

Jeff Harrison, EIC 2800 Team Leader
571-272-2511, JEF 4B68

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 2810*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)
- *Relevant prior art **not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC2800, CP4-9C18

131656

SEARCH REQUEST FORM Scientific and Technical Information Center - EIC2800

Rev. 3/15/2004 This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 272-2511.

Date 9/2/04 Serial # 10/085,607 Priority Application Date 2/27/2001 JP

Your Name M. Lewis Examiner # _____

AU 2822 Phone 272-1837 Room 5A30

In what format would you like your results? Paper is the default. PAPER DISK EMAIL

Need before 9/16

If submitting more than one search, please prioritize in order of need.

The EIC searcher normally will contact you before beginning a prior art search. If you would like to sit with a searcher for an interactive search, please notify one of the searchers.

Where have you searched so far on this case?

Circle: USPT DWPI EPO Abs JPO Abs IBM TDB

Other: _____

What relevant art have you found so far? Please attach pertinent citations or Information Disclosure Statements. _____

What types of references would you like? Please checkmark:

Primary Refs ✓ Nonpatent Literature ___ Other _____

Secondary Refs ✓ Foreign Patents ___ _____

Teaching Refs ___ _____

What is the topic, such as the **novelty**, motivation, utility, or other specific facets defining the desired **focus** of this search? Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 1 & 3-5

Problem: See pages 1-7

Solution: " " 7-15

- light sensing device at the top electrode of the light-emitting element

Staff Use Only		Type of Search		Vendors	
Searcher:	HARRISON	Structure (#)		STN	✓
Searcher Phone:	22511	Bibliographic	✓	Dialog	✓
Searcher Location:	STIC-EIC2800, JEF-4B68	Litigation		Questel/Orbit	
Date Searcher Picked Up:	9-20	Fulltext	X	Lexis-Nexis	
Date Completed:	9-20-04	Patent Family		WWW/Internet	
Searcher Prep/Rev Time:	X 9/21/04	Other	DEC I	Other	
Online Time:	X				

L27 **ANSWER 13 OF 14 HCAPLUS COPYRIGHT ACS on STN**
AN 2000:420226 HCAPLUS Full-text
DN 133:111687
ED Entered STN: 23 Jun 2000
TI **Efficient screening of materials and fast optimization of vapor deposited OLED characteristics**
AU Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner
CS Makromolekulare Chemie I, Universitat Bayreuth and Bayreuther Institut fur Makromolekulforschung (BIMF), Bayreuth, D-95440, Germany
SO Macromolecular Symposia **(2000)**, 154(Polymers in Display Applications), 209-221
CODEN: MSYMEC; ISSN: 1022-1360
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
AB A combinatorial approach combining vapor deposition of organic mols. and a movable mask technique was used to screen and optimize materials and **organic light emitting device** configurations fast and efficiently. Some low mol. weight triphenyldiamine derivs. with different electronic and thermal properties were compared in 2 **layer**, **ITO**/TPD/Alq3/Al device configurations. The optimum thickness for Alq3 layer was obtained by evaporating a linear gradient of Alq3 on **top** of various TPD **layers**. Further, a landscape library with 2 orthogonal linear gradients of TPD and Alq3 was prepared to study the dependence of efficiency on thickness of both layers simultaneously. The necessity and the efficiency of an addnl. spiro-quinoxaline compound as electron transporting/hole blocking layer was also studied using a landscape library of Alq3 vs. spiro-quinoxaline on top of TPD. The efficiency of the 2 layer device depends not only on the Alq3 layer thickness, but also on the TPD layer thickness. The **photometric** efficiency of a TPD/Alq3 device can be improved by replacing the optimum Alq3 layer thickness by certain combinations of Alq3/spiro-quinoxaline layers.

44/9/7
DIALOG(R)File 2:INSPEC

6723470 INSPEC Abstract Number: B2000-11-7230C-024
Title: Characteristics of photosensors based on solid solutions of A/sup II/B/sup VI/ compounds
Author(s): Lubegin, G.V.; Gusliannikov, V.V.
Author Affiliation: Tech. Univ., Moscow State Inst. of Electron. Eng., Russia
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3901 p.189-94
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 1999 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(1999)3901L.189:CPBS;1-#
Material Identity Number: C574-1999-347
U.S. Copyright Clearance Center Code: 0277-786X/99/$10.00
Conference Title: Photonics for Transportation
Conference Sponsor: SPIE Russian Chapter
Conference Date: 10-14 March 1999 Conference Location: Prague, Czech Republic
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Experimental (X)
Abstract: In the work there are submitted the results of the research of **photosensors** on a base of solid solutions of A/sup II/B/sup VI/ compounds for **measurement and control of intensity of low-level light** in narrow areas of spectrum. The basic principles of technological process of manufacturing of injection photo diodes are described. The results of measurements of voltage-current characteristics and spectral characteristics of photo diodes, received in laboratory technological process with the various contents of cadmium and zinc in ZnCd/sub 1-x/S/sub x/ solid solutions, and also sulfur and selenium in CdS/sub 1-x/Se/sub x/ solid solutions are submitted. The investigation results have shown, that photosensors work at low positive bias voltage, do not require cooling, have high sensitivity in a maximum and narrow selectivity. In CdS/sub 1-x/Se/sub x/-photosensors **the photosensitive protecting coverage of transparent films** on the base of As/sub 2/S/sub 3/ compounds is applied. The opportunity of creation of a wide discrete range of photo diodes with the sensitivity in range from near ultraviolet up to near infrared area of spectrum is shown. (6 Refs)

L27 ANSWER 14 OF 14 HCAPLUS COPYRIGHT ACS on STN
AN 1999:242029 HCAPLUS Full-text
DN 131:51719
ED Entered STN: 20 Apr 1999
TI Efficient screening of electron transport material in **multi-layer organic light emitting diodes** by combinatorial methods
AU Schmitz, Christoph; Posch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner
CS Lehrstuhl fur Makromolekulare Chemie I und Bayreuther Institut fur Makromolekulforschung (BIMF), Universitat Bayreuth, Bayreuth, 95447, Germany
SO **Physical Chemistry Chemical Physics (1999), 1(8), 1777-1781**
CODEN: PPCPFQ; ISSN: 1463-9076
PB Royal Society of Chemistry
DT Journal
LA English
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
AB A combinatorial approach combining vapor deposition of organic mols. and a mask technique was used to prepare on one substrate a matrix of 49 **organic light emitting** diodes (OLEDs) with different configurations and layer thicknesses. A landscape library with 2 orthogonal, linear gradients of an emitter and a hole blocking electron transport material on top of a hole transport layer of constant thickness was prepared The aim of this experiment was to study the influence of an addnl. electron transport material on the efficiency. Using a semi-automated measurement set-up, the device parameters for each of the 49 OLEDs were evaluated. The existence of an optimum Alq3 **layer** thickness for **ITO**/TPD/Alq3/Al 2-layer devices was confirmed and such an optimized 2-layer structure could not be improved by adding an addnl. hole blocking layer to the optimum Alq3 layer. However, an improvement in **photometric efficiency** can be achieved by replacing the optimum Alq3 layer thickness by certain combinations of Alq3/spiro-quinoxaline layers.

L27 ANSWER 12 OF 14 HCAPLUS COPYRIGHT ACS on STN

AN 2000:462283 HCAPLUS Full-text

DN 133:273894

ED Entered STN: 10 Jul 2000

TI Efficient screening of electron transport material in multilayer **organic light-emitting** diodes by combinatorial methods

AU Schmitz, Christoph; Poesch, Peter; Thelakkat, Mukundan; Schmidt, Hans-Werner

CS Lehrstuhl Makromol. Chem. I und Bayreuther Inst. Makromolekulforschung (BIMF), Univ. Bayreuth, Bayreuth, Germany

SO Proceedings of SPIE-The International Society for Optical Engineering **(1999)**, 3797(Organic Light-Emitting Materials and Devices III), 423-431
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

AB A combinatorial approach combining vapor deposition of organic mols. and a mask technique was used to prepare on one substrate a matrix of 49 **organic light emitting diodes (OLEDs)** with different configuration and layer thickness. A landscape library with two orthogonal, linear gradients of an emitter and a hole blocking electron transport material on top of a hole transport layer of constant thickness was prepared The aim of this experiment was to study the influence of an addnl. electron transport material on the efficiency. Using a semi-automated measurement set-up, the device parameters for each of the 49 OLEDs were evaluated. The existence of an optimum Alq3 layer thickness for two-**layer** devices **ITO**/TPD/Alq3/Al is confirmed and such an optimized two-layer structure could not be improved by adding an addnl. hole blocking layer to the optimum Alq3 layer. But an improvement of **photometric efficiency** can be obtained by replacing the optimum Alq3 layer thickness by certain combinations of Alq3/spiro-Quinoxaline layers.

L69 ANSWER 2 OF 4 HCAPLUS COPYRIGHT ACS on STN

AN 1998:90583 HCAPLUS Full-text

DN 128:186027

ED Entered STN: 18 Feb 1998

TI Transient electroluminescence under short and strong voltage pulses

AU Chayet, Haim; Pogreb, Roman; Davidov, Dan

CS Racah Institute Physics, Hebrew University Jerusalem, 91904, Israel

SO Proceedings of SPIE-The International Society for Optical Engineering **(1997)**, 3148(Organic Light-Emitting Materials and Devices), 34-44
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74

AB We present high voltage pulsed electroluminescence (EL) measurements on light-emitting diodes (LED) based on thin films of poly(p-phenylenevinylene)(PPV) **sandwiched** between **ITO** and aluminum electrodes. We observe two regimes in the LED operation depending on the driving pulsed c.d. At low current densities, below 50 A/cm2, the pulsed EL follows its d.c. characteristics with yellow-green emission. Above some threshold c.d. we observe addnl. UV-violet emission (centered at 390 nm, ≈3.17 eV); the amplitude of the pulsed UV EL increases exponentially with the applied voltage. When the amplitude of the voltage pulses is around 300 V, the current signal exhibits a sharp current peak followed by a dramatic increase in UV EL intensity but only moderate increase of the green emission. We propose a possible explanation for the appearance of the UV emission upon application of strong elec. pulses. It is due, we believe, to "hot" carriers in strong fields which partially inhibit the formation fo singlet excitons and enhance the probability for direct inter-band radiative transitions. We show that our very simple device can be operated at c.d. as high as 140 A/cm2 and achieve a peak brightness of 105 cd/m2 without appreciable degradation

L52 ANSWER 24 OF 31 HCAPLUS COPYRIGHT ACS on STN

AN 1997:405171 HCAPLUS Full-text

DN 127:168729

ED Entered STN: 30 Jun 1997

TI Progress in the field of **integrated optoelectronics** based on porous silicon

AU La Monica, S.; Maiello, G.; Ferrari, A.; Masini, G.; Lazarouk, S.; Jaguiro, P.; Katsouba, S.

CS INFM Unita di Roma, Dipartimento di Ingegneria Elettronica, Universita di Roma La Sapienza, Via Eudossiana 18, 00184, Rome, Italy

SO Thin Solid Films **(1997)**, 297(1-2), 265-267
CODEN: THSFAP; ISSN: 0040-6090

PB Elsevier

DT Journal

LA English

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74

AB Al-porous Si (Al-PS) Schottky junctions demonstrated to be promising candidates for stable, wide band emission, Si based light sources. Al **top** contacts are defined by transforming the Al layer between different pads into anodic alumina (Al2O3).The light emitted by the devices arises from the border of the metallic contact through the **transparent** and insulating alumina. With the aim of obtaining a higher external efficiency, different shapes for the Al **top** contact were designed and characterized. The layout of the masks used in photolithog. was designed having in mind 2 possible applications for the light source: (1) as a Si technol.-compatible light source to be used for optical interconnections within VLSI-IC, and (2) as a pixel for 1-dimensional and 2-dimensional **electroluminescent** panels. An increase of external quantum efficiency due to increase of perimeter/area ratio was demonstrated. Also, the detection of the light emitted from the junction by a porous Si **photodetector integrated on the same chip** is presented. Fabricated devices are characterized by elec. and optoelectronic techniques.

L21 ANSWER 3 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-219835 [19] WPIX
CR 1999-168987 [14]
DNN N1999-162673
TI Finger print reader - has unevenness detector optical element formed in **transparent** electric **conduction** layer for static removal which inturn is formed above **upper** surface of **photosensors**.
DC S05 T01 X12
PA (CASK) CASIO COMPUTER CO LTD
CYC 1
PI JP 11053524 A 19990226 (199919)* 10 G06T001-00
ADT JP 11053524 A JP 1997-222019 19970805
PRAI JP 1997-222019 19970805
AB JP 11053524 A UPAB: 19990518
NOVELTY - A **photosensor** (12) with two dimensionally arranged sensors is provided in a surface of a **light source** (11). A **transparent** electric **conduction** layer (13) for static removal is arranged above the **photosensor** which has an optical element (14) for unevenness detection.
USE - For reading uneven projections in finger points.
ADVANTAGE - Prevents destroying of finger print or malfunctioning of reader as static generated is removed continuously. DESCRIPTION OF DRAWING(S) - The figure shows partial sectional view showing the principal part of finger print reader. (11) **Light source**; (12) **Photosensor**; (13) **Transparent** electric **conduction** layer.

L69 ANSWER 3 OF 4 HCAPLUS COPYRIGHT ACS on STN

AN 1996:477725 HCAPLUS Full-text

DN 125:144431

ED Entered STN: 13 Aug 1996

TI The **electroluminescent** and photodiode device made of a polymer blend

AU Park, J. Y.; Le, H. M.; Kim, G. T.; Park, H.; Park, Y. W.; Kang, I. N.; Hwang, D. H.; Shim, H. K.

CS Department of Physics, Seoul National University, Seoul, 151-742, S. Korea

SO Synthetic Metals **(1996)**, 79(3), 177-181
CODEN: SYMEDZ; ISSN: 0379-6779

PB Elsevier

DT Journal

LA English

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 76

AB The device of **sandwich** configuration **indium- tin oxide** (**ITO**)/polymer blend/Al **emits orange light under forward bias at +10 V and the same device acts as a photodiode under reverse bias.** To investigate the photodiode characteristics, the 516 nm wavelength with 9.5 mW/cm2 intensity of light is illuminated through the Al contact side of the device. The I-V (current-voltage) characteristic measurement shows a short circuit current and open circuit voltage of -1.22+10-9 A/cm2 and 0.8 V, resp. The ratio of the photocurrent to the dark current is about 4 + 102 at -2.5 V reverse bias. The maximum d.c. sensitivity is 1.35 + 10-5 A/W at -7 V reverse bias voltage with 16 mW/cm2 intensity of the incident light. **Use of this device in making photosensors may be possible.**

L5 **ANSWER 14 OF 15 JAPIO (C) 2004 JPO on STN**
AN 1997-283808 JAPIO Full-text
TI LIGHT DETECTING AND RADIATING ELEMENT MODULE AND CHIP
IN YANAKA MASUMI; OGIWARA MITSUHIKO; SHIMIZU TAKAATSU
PA OKI ELECTRIC IND CO LTD
PI **JP 09283808** A 19971031 Heisei
AI JP 1996-98125 (JP08098125 Heisei) 19960419
PRAI **JP 1996-98125**19960419
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1997
IC ICM H01L033-00
ICS B41J002-44; B41J002-45; B41J002-455
AB PROBLEM TO BE SOLVED: To provide a light detecting and radiating element module each to the works of positioning chips in place and replacing a defective chip with new one.
SOLUTION: A LED module is composed of many chips 10 each having many light emitting parts 12 on a substrate 14. The light emitting parts 12 mostly locate at a first side face 10a of the chip 10 and array along this face such that the first side faces 10a of the odd-numbered chips 10x locate at one side of a line L of the array of the light emitting parts 12 of all the chips and first side faces 10 of the even-numbered chips 10y locate at the other side of the line L.

L21 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:491140 HCAPLUS
DN 127:144563
ED Entered STN: 04 Aug 1997
TI Electrochemical **luminescent** cell and electrochemical analytical device with high sensitivity therefrom
IN Miyahara, Yuji; Kajama, Tomoharu; Tao, Ryuji; Yasuda, Kenji
PA Hitachi, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G01N021-76
ICS G01N021-78; G01N027-416; G01N033-543
CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 72
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09189662	A2	19970722	JP 1996-731	19960108
PRAI JP 1996-731		19960108		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09189662	ICM	G01N021-76
	ICS	G01N021-78; G01N027-416; G01N033-543

AB The cell includes a (i) a **transparent**, (ii) a porous thin-film, or (iii) a mesh-like active electrode which is (partially) formed on a bottom plane of the cell. The cell includes a **transparent** base substrate having a **translucent** active electrode on the surface, a through hole-forming spacer, and an **upper** substrate forming a counter electrode on the surface and containing a sample-injection and -ejection holes, resp. Title anal. device includes the cell, a magnet, a **light detector**, and a system changing the relative position of the active **electrode** vs. the **light detector** and that vs. the magnet. The anal. device includes the cell, a voltage-applying system, and the detector where the **luminescence** is detected from the **transparent** bottom plane of the cell. The device is especially useful for clin. anal.

IT 1332-29-2, Tin oxide 50926-11-9, **Indium tin oxide**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(active **electrode**; electrochem. **luminescent** cell and anal. device with high sensitivity therefrom for medical uses)

L55 ANSWER 9 OF 10 HCAPLUS COPYRIGHT ACS on STN

AN 1998:333630 HCAPLUS Full-text

DN 129:34535

ED Entered STN: 04 Jun 1998

TI Transparent thin-film EL display apparatus with ambient light adaptation means

IN Inoguchi, Kazuhiro; Uchida, Tomoya; Ito, Nobuei; Hattori, Tadashi

PA Nippondenso Co., Ltd., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	**US 5757127**	**A**	**19980526**	**US 1995-489157**	**19950609**
	JP 08078165	A2	19960322	JP 1994-212653	19940906
	JP 2836497	B2	19981214		
	US 5965981	**A**	**19991012**	**US 1998-14678**	**19980128**
PRAI	JP 1994-152954		19940610		
	JP 1994-212653		19940906		
	JP 1995-100157		19950331		
	JP 1995-100157		19950331		
	US 1995-489157		19950609		

AB **Transparent thin-film electroluminescent display** devices are described which are provided with films formed from **reversible photochromic materials behind the electroluminescent element**, or with a light shutter system with a solar cell-based power supply so that contrast can be controlled actively in response to changing ambient light. Accordingly, normally the display apparatus displays various items of information through the front substrate and ensures visibility of the background through the display apparatus, and **when high-intensity external light enters through the rear, the display apparatus reacts** and blocks this light by means of a light shutter function, thereby enabling reliable display of the information without impairment of display contrast, thus guaranteeing a stable and highly reliable display.

L21 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:465772 HCAPLUS
DN 133:66033
ED Entered STN: 12 Jul 2000
TI Contact image sensor and the manufacture thereof
IN Sung, Kang-hyun
PA Lg Electronics Co., Ltd., S. Korea
SO Repub. Korea, No pp. given
CODEN: KRXXFC
DT Patent
LA Korean
IC ICM H01L027-146
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI KR 9606204	B1	19960509	KR 1992-25550	19921224
PRAI KR 1992-25550		19921224		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
KR 9606204	ICM	H01L027-146

AB The contact image sensor comprises: a substrate; a field **light emitting** element section for a **light source**, consisting of a lower electrode, a first insulation layer, a **light emitting** layer, a second insulation layer, and an **upper electrode** formed on the defined surface of the substrate in turn; a **photosensor** section for **detecting** the **light** reflected from manuscript paper, consisting of a lower electrode, an active layer, a **transparent electrode**, a first insulation layer and an **upper electrode** formed on the surface of the substrate opposite to the field **light emitting** element section in turn; and a light reflection section for reflecting the light from the field **light emitting** element to the manuscript paper to form the **photosensor** section near the field **light emitting** element to give a slope and to extend the **upper electrode** of the **photosensor** section to the sloped portion.

L21 ANSWER 5 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1994-137437 [17] WPIX
DNN N1994-107961
TI Direct contact type image **sensor** device - has **light** transmitting substrate with **transparent** electrically **conductive** layer on lower surface and image **sensor** chip on **upper** surface.
DC W02
IN FUJIWARA, S; NAKAGAWA, M; NAKAMURA, T; TANAKA, E
PA (MATU) MATSUSHITA ELEC IND CO LTD; (MATU) MATSUSHITA ELECTRIC IND CO LTD; (MATU) MATSUSHITA DENKI SANGYO KK
CYC 6

PI	EP 594195	A1	19940427 (199417)*	EN	26	H04N001-028
	R: DE FR GB					
	JP 06141129	A	19940520 (199425)		5	H04N001-028
	JP 06178047	A	19940624 (199430)		5	H04N001-028
	JP 06350066	A	19941222 (199510)		5	H01L027-14
	US 5477047	A	19951219 (199605)		17	H01J040-14
	US 5556809	A	19960917 (199643)		15	H01L021-60
	EP 594195	B1	19991229 (200005)	EN		H04N001-028
	R: DE FR GB					
	JP 2998468	B2	20000111 (200007)		5	H04N001-028
	DE 69327440	E	20000203 (200013)			H04N001-028
	KR 137398	B1	19980429 (200013)			H01L027-14

PRAI JP 1992-285759 19921023; JP 1992-327753 19921208;
JP 1993-138225 19930610
REP 01Jnl.Ref; DE 3111746; DE 3643576; EP 154962; EP 177117; EP 296603; EP 298458; EP 361515; EP 461302; FR 2568060; GB 2228366
IC ICM H01J040-14; H01L021-60; H01L027-14; H04N001-028
ICS G02B005-00; H04N005-335
AB EP 594195 A UPAB: 19940613
The sensor device includes a light transmitting substrate (1) having an **upper** surface and a lower surface. A patterned conductor layer (52) is formed over the **upper** surface of the substrate. A **transparent** electrically **conductive** layer is formed on the lower surface of the substrate. An image sensor chip (3) mounted face down on the **upper** surface has an insulating resin layer interposed.

A light interrupting layer (50) is provided between the patterned conductor layer and the **upper** surface of the substrate. A light interrupting portion interrupts a portion of a light beam being radiated on an original through the light transmitting substrate by a **light source** (20) disposed above the substrate. The image sensor chip and the light interrupting portion serve as an optical throttle for the light.

ADVANTAGE - When the sensor device has incorporated one or two slits, optical crosstalk and optical noises occurring due to an unnecessary portion of reflected light are reduced, improving the resolution of the image sensor device

Dwg.1/9
ABEQ US 5477047 A UPAB: 19960205
A direct-contact type image sensor device comprising:

a light-transmitting substrate having an **upper** surface and a lower surface;

a patterned conductor layer formed over the **upper** surface of the light-transmitting substrate;

a **transparent** electrically **conductive** layer formed on the lower surface of the light-transmitting substrate; and

an image sensor chip mounted face-down on the **upper** surface of the light-transmitting substrate, with an insulating resin layer being interposed between the image **sensor** chip and the **upper** surface of the light-transmitting substrate, the image sensor chip being mounted by a flip-chip-bonding method,

the image sensor device further comprising:

a light-interrupting layer provided between the patterned conductor layer and the **upper** surface of the light-transmitting substrate; and

a light-interrupting portion for interrupting a portion of a light beam, the light beam being radiated on an original through the light-transmitting substrate by a **light source** disposed above the light-transmitting substrate,

the image sensor chip and the light-interrupting portion serving as an optical throttle for the light beam.

Dwg.1/9

ABEQ US 5556809 A UPAB: 19961025

A method for producing a direct-contact type image sensor device comprising: a light-transmitting substrate having an **upper** surface and a lower surface; a first conductor layer formed on the **upper** surface of the light-transmitting substrate; a second conductor layer formed on the lower surface of the light-transmitting substrate; a **transparent** electrically **conductive** layer formed on the second conductor layer; and an image sensor chip mounted face-down on the **upper** surface of the light-transmitting substrate, with an insulating resin layer being interposed between the image **sensor** chip and the **upper** surface of the light-transmitting substrate, the image sensor chip being mounted by a flip-chip-bonding method, the first conductor layer including a circuit portion electrically connected to the image sensor chip and a light-interrupting portion for interrupting a portion of a light beam, the light beam being radiated on an original through the light-transmitting substrate by a **light source** disposed above the light-transmitting substrate, and the second conductor layer including a second circuit portion and a second light-interrupting portion for interrupting a further portion of the light beam,

the method including:

a step for depositing the first conductor layer on the **upper** surface of the light-transmitting substrate;

a step for patterning the first conductor layer by a photolithography method so as to form the first circuit portion and the first light-interrupting portion by use of the same mask;

a step for depositing the second conductor layer on the lower surface of the light-transmitting substrate; and

a step for patterning the second conductor layer by photolithography method so as to form the second circuit portion and the second light-interrupting portion by use of the same mask.

L21 ANSWER 6 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1990-147954 [19] WPIX
DNN N1990-114656
TI Image sensor with chip adhered to **transparent** substrate - uses **transparent** light-curing insulation resin to bring electrode into contact with circuit conductor layer.
DC U14 W02
IN FUJIWARA, S; MURATA, T; NAKAMURA, T
PA (MATU) MATSUSHITA ELEC IND CO LTD
CYC 13
PI

WO 9004263	A	19900419 (199019)*			
RW: AT BE CH DE FR GB IT LU NL SE					
W: KR US					
JP 02105774	A	19900418 (199022)			
JP 02107053	A	19900419 (199022)			
EP 393206	A	19901024 (199043)			
R: DE FR GB					
JP 02263476	A	19901026 (199049)			
JP 02263481	A	19901026 (199049)			
JP 02272764	A	19901107 (199051)			
JP 02309643	A	19901225 (199106)			
US 5065006	A	19911112 (199148)			
US 5138145	A	19920811 (199235)		13	H01J040-14
US 5266828	A	19931130 (199349)		13	H01L027-14
KR 9306988	B1	19930724 (199427)			H01L027-148
EP 393206	A4	19910828 (199518)			
EP 393206	B1	19960508 (199623)	EN	17	H01L027-14
R: DE FR GB					
DE 68926448	E	19960613 (199629)			H01L027-14

AB WO 9004263 A UPAB: 19930928
An image sensor chip (12) is provided on the lower surface with a **light**-receiving **sensor** (13) and an **electrode** (15). The chip is adhered onto the **upper** surface of a **transparent** substrate (18) via **transparent** light-curing insulating resin (16) in order to bring the electrode into contact with a circuit conductor layer (17) formed on the **upper** surface of the substrate. No fine metallic wire is used to connect the electrode to the circuit conductor layer.
ADVANTAGE - Mounting is simplified.
1/7
ABEQ US 5065006 A UPAB: 19930928
The image sensor comprises a **transparent** substrate having circuit conductor layers on one side, and an image sensor chip that is set on the one side of the **transparent** substrate by means of a **transparent** photosetting type insulating resin. The image **sensor** chip has **photo sensors** and **electrodes** on the side facing the substrate. The electrodes are in contact with the circuit conductor layers, with the proviso that the photo-setting type resin is not disposed between the electrodes and circuit conductor layers.
The circuit conductor layers contain frit therein. At least one of the chip electrodes and the circuit conductor layers is provided with projections projecting toward the chip electrodes or circuit conductor layers with which it is in contact. Lenses are disposed on a portion of the **transparent** substrate corresponding to the **photo sensors**. The lenses are composed of an optical fibre array.
ADVANTAGE - Reduces complexity of wiring work.
ABEQ US 5138145 A UPAB: 19930928
A portion of the substrate is **transparent** and has circuit conductor layers on its **upper** side. The method brings an image sensor chip, and the underside with electrodes, into contact with the **upper** side of the substrate, so that the photo-setting type resin is wedged away and the electrodes come into contact with the corresponding circuit conductor layers.

Then flowing current into the image sensor chip through the circuit conductor layers to determine that the image sensor chip operates in a normal manner. Then irradiating the photo-setting type resin with light so that the resin is hardened.

USE - For the production of image sensors having simplified chip mounting are provided which comprise disposing a photo-setting type insulating resin on the **upper** side of a substrate.

4/7b

ABEQ US 5266828 A UPAB: 19940126

The image **sensor** includes **photo sensors** (13). An object thereof is to simplify mounting operation of an image sensor chip (12) provided with the **photo sensors** (13). In order to accomplish this object, the **photo sensors** (13) and **electrodes** (15) are disposed on the underside of the image sensor chip (12). The image sensor chip (12) is bonded to the **upper** side of a **transparent** substrate (18) by means of a **transparent** photo-setting type insulating resin (16), so that the electrodes (15) come into contact with circuit conductor layers (17) disposed on the **upper** side of the **transparent** substrate (18).

Since fine metal wire (75) by which the electrodes (15) and the circuit conductor layers (17) are connected to each other is not required, mounting operation can be simplified.

USE/ADVANTAGE - In image sensor with optical fiber array. Exclusion of complicated wiring, using fine metal wire, improved efficiency and provision for adapting for reduced electrode pitch.

Dwg.1b/7

ABEQ EP 393206 B UPAB: 19960610

An image sensor comprising **transparent** substrate (26) having an **upper** surface, circuit **conductor** layers on said **upper** surface and an image sensor chip (22) that is placed on said **upper** surface by means of a **transparent** insulating resin, wherein said image sensor chip (22) comprises **photo sensors** (23) and **electrodes** on its under side, said electrodes being in contact with said circuit conductor layers, and wherein an optical fibre array (25) is embedded in said **transparent** substrate (26), characterised in that illumination **light sources** (24) are arranged on said **upper** surface in the vicinity of said **photo sensors** (23).

L21 ANSWER 7 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1989-107754 [15] WPIX
CR 1994-076071 [10]
DNN N1989-082195
TI Contact image reader with bias corrected **sensor** cells - has **light** shield electrode receiving voltage related to **sensor electrode** values and is varied in accordance with mean signal at each cell.
DC U12 U14 W02
IN GOFUKU, I; ITABASHI, S; SAIKA, T
PA (CANO) CANON KK
CYC 5
PI EP 310702 A 19890412 (198915)* EN 28
R: DE FR GB IT NL
EP 310702 B1 19970108 (199707) EN 23 H01L027-14
R: DE FR GB IT NL
DE 3751998 G 19970220 (199713) H01L027-14
AB EP 310702 A UPAB: 19971013
Each sensor cell of a contact-type image reader has a **transparent** substrate (11) which carries a photoconductive layer (14) deposited on insulation (13) and submounted by a comb-formation double electrode structure (116,117). A **light source** (30) illuminates an original (P) passed over the cell **top**, producing read voltages at the electrodes which are capacitor stored.

Noise due to stray **light** under the **sensor** is prevented by a metal shield (112) under the insulation (13). A bias voltage, applied to the shield to eliminate instability otherwise experienced, is adjusted by external circuity to limit dark current in the semiconductor layer and so pressure resolution signal voltage currently present.

USE/ADVANTAGE - Application and regulation of shield bias voltages ensures optimum performances in each cell all of reader of particular value in copiers, facsimile and other types of reaching apparatus.
Dwg.2/17
ABEQ EP 310702 B UPAB: 19970212
A method of operating **photo-sensor** units, each **photo-sensor** unit (108;208) including a light-shielding layer (112;202) made of an electrically conductive material and formed on a light-transmitting substrate (11;201), an insulating layer (13;203) formed on said light-shielding layer (112;202), a semiconductor layer (14) formed on said insulating layer (13;203) and a pair of **upper electrodes** (116,117; 216,217) provided on said semiconductor layer (14) and spaced from each other, the space between said **upper electrodes** (116,117; 216,217) constituting a light-receiving portion, wherein light (L) is applied from the reverse side of said light-transmitting substrate (11;201) through a **window** (19;219) in said light-shielding layer (112;202), said insulating layer (13;203), said semiconductor layer (14) and said **upper electrodes** (116,117; 216,217) onto an image-carrying original (P) which is then reflected by said original (P) so that light reaches said light receiving portion of said **photo-sensor** unit (108;208), said method of operating said **photo-sensor** units (108;208) being characterised by the steps of applying a first bias voltage (V1) having the polarity of the carrier mainly carrying a photoelectric current generated in said semiconductor layer (14) to each of said light-shielding layers (112;202) in a reading period (T1), and applying a second bias voltage (V2) having the same polarity as said first bias voltage (V1) and an absolute value smaller than that of said first bias voltage (V1) to each of said light-shielding layer (112;202) in a non-reading period (T2).
2a,2b/14

L55 ANSWER 10 OF 10 HCAPLUS COPYRIGHT ACS on STN

AN 1992:204094 HCAPLUS Full-text

DN 116:204094

ED Entered STN: 16 May 1992

TI **Transparent structures for semiconductor light-emitting and light-detecting devices**

IN Janietz, Peter Johannes; Kirschke, Bernd; Heckner, Karl Heinz; Schlesinger, Roland

PA Humboldt-Universitaet zu Berlin, Germany

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	**DD 296579**	**A5**	**19911205**	**DD 1990-342669**	**19900711**
PRAI	**DD 1990-342669**		**19900711**		

AB The title structures comprise: 0.5-3 monolayers of metal atoms on ions selected from the Pt-group metals, the Fe-group metals, the rare earths, or Pb; a 1st 10-50 nm thick In-Sn oxide (**ITO**) layer formed at 473-623 K with particle sizes in the 1-10 nm region and an In fraction of 70-95%; and a 2nd 40-500 nm thick **ITO** layer formed at 300-750 °K having an In content of 70-95%. The structure prevents diffusion between the **ITO** and semiconductor layers in the devices.

L21 ANSWER 7 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1989-107754 [15] WPIX
CR 1994-076071 [10]
DNN N1989-082195
TI Contact image reader with bias corrected **sensor** cells - has **light** shield electrode receiving voltage related to **sensor electrode** values and is varied in accordance with mean signal at each cell.
DC U12 U14 W02
IN GOFUKU, I; ITABASHI, S; SAIKA, T
PA (CANO) CANON KK
CYC 5
PI EP 310702 A 19890412 (198915)* EN 28
R: DE FR GB IT NL
EP 310702 B1 19970108 (199707) EN 23 H01L027-14
R: DE FR GB IT NL
DE 3751998 G 19970220 (199713) H01L027-14
AB EP 310702 A UPAB: 19971013
Each sensor cell of a contact-type image reader has a **transparent** substrate (11) which carries a photoconductive layer (14) deposited on insulation (13) and submounted by a comb-formation double electrode structure (116,117). A **light source** (30) illuminates an original (P) passed over the cell **top**, producing read voltages at the electrodes which are capacitor stored.

Noise due to stray **light** under the **sensor** is prevented by a metal shield (112) under the insulation (13). A bias voltage, applied to the shield to eliminate instability otherwise experienced, is adjusted by external circuity to limit dark current in the semiconductor layer and so pressure resolution signal voltage currently present.

USE/ADVANTAGE - Application and regulation of shield bias voltages ensures optimum performances in each cell all of reader of particular value in copiers, facsimile and other types of reaching apparatus.
Dwg.2/17
ABEQ EP 310702 B UPAB: 19970212
A method of operating **photo-sensor** units, each **photo-sensor** unit (108;208) including a light-shielding layer (112;202) made of an electrically conductive material and formed on a light-transmitting substrate (11;201), an insulating layer (13;203) formed on said light-shielding layer (112;202), a semiconductor layer (14) formed on said insulating layer (13;203) and a pair of **upper electrodes** (116,117; 216,217) provided on said semiconductor layer (14) and spaced from each other, the space between said **upper electrodes** (116,117; 216,217) constituting a light-receiving portion, wherein light (L) is applied from the reverse side of said light-transmitting substrate (11;201) through a **window** (19;219) in said light-shielding layer (112;202), said insulating layer (13;203), said semiconductor layer (14) and said **upper electrodes** (116,117; 216,217) onto an image-carrying original (P) which is then reflected by said original (P) so that light reaches said light receiving portion of said **photo-sensor** unit (108;208), said method of operating said **photo-sensor** units (108;208) being characterised by the steps of applying a first bias voltage (V1) having the polarity of the carrier mainly carrying a photoelectric current generated in said semiconductor layer (14) to each of said light-shielding layers (112;202) in a reading period (T1), and applying a second bias voltage (V2) having the same polarity as said first bias voltage (V1) and an absolute value smaller than that of said first bias voltage (V1) to each of said light-shielding layer (112;202) in a non-reading period (T2).
2a,2b/14

L5 ANSWER 4 OF 15 WPIX COPYRIGHT THOMSON DERWENT on STN

AN 1991-117147 [16] WPIX Full-text

DNN N1991-090206 DNC C1991-050394

TI Light emitting diode device with transparent silicon nitride film - in which **intensity of emitted light can be maintained at constant level** even when temperature of light emitting section rises.

IN TANAKA, Y

PA (EAST) EASTMAN KODAK CO

PI US 5005058 A 19910402 (199116)*

JP 03270082 A 19911202 (199203)

PRAI **JP 1990-69197 19900319**

AB US 5005058 A UPAB: 19930928

A LED comprises a light emitting section constituted by a P-N junction and a thin film formed adjacent to the light emitting section. Light produced in the light emitting section is transmitted to the outside through the thin film, which is formed of a material wherein the transmittivity increases as the wavelength of the emitted light increases.

Pref. (i) the rate of change in the transmittivity T of the thin film relative to the wavelength lambda of the emitted light satisfies dT/d lambda greater than 10 power(-3) (nm-1); (ii) the thickness d of the thin film is (2m+1)+ alpha less than 4nd/lambda less than 2(m+1)-beta, where m is zero or a positive integer, n is the refractive index of the thin film, lambda is the wavelength of the emitted light, alpha is zero or a positive constant, and beta is zero or a positive constant.

USE/ADVANTAGE - LED device in which the intensity of the emitted light can be maintained at a more or less constant level, even when the temperature of the light-emitting section rises. 1/7

L21 ANSWER 8 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1985-262982 [42] WPIX
DNN N1985-196604 DNC C1985-114012
TI **Photosensor** with built-in self-test capability - has test **LED** connected by prismatic light guide to adjacent photodiode.
AW **LIGHT EMIT** DIODE.
DC A85 U11 U12
PA (SANT-N) SANTA BARBARA RES CENTER
CYC 1
PI US 4544843 A 19851001 (198542)* 7
ADT US 4544843 A US 1983-461896 19830128
PRAI US 1983-461896 19830128
IC H01J005-02
AB US 4544843 A UPAB: 19930925
A **photosensor** comprises a base (16) with terminals and mounting a **photodetector** connected to the terminals, with an opaque enclosure on the base and around the detector having a **transparent window** spaced adjacent to the **detector**. A **light emitter** mounted on the base **top** adjacent to the **photodetector** is also connected to the terminals and has a prismatic **light** conduit between **emitter** and detector to pass **emitter light** to a selected small part of the detector with min. obstruction of light entering through the **window**.

The detector is pref. a photodiode (12) and the emitter (12) a **LED** with both planar and mounted side by side with the conduit (40) overlying the **LED** and covering part of the photodiode corner. The photodiode and **LED** are pref. mounted on respective ceramic pads (24,30) with gold plated **tops** using **conductive** epoxy resin.

ADVANTAGE - Provides build-in self-test capability.

1/4
FS CPI EPI
FA AB

44/9/26
DIALOG(R) File 2: INSPEC

01765287 INSPEC Abstract Number: C81034952
Title: Regulate lamp output with one IC
Author(s): Hopkins, T.
Author Affiliation: Motorola Inc., Phoenix, AZ, USA
Journal: EDN vol.26, no.9 p.176, 178
Publication Date: 29 April 1981 Country of Publication: USA
CODEN: EDNSBH ISSN: 0012-7515
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: Discusses how to **automatically control** a lamp's **brightness** by employing the scheme presented. The TDA1085A-originally designed as a speed control for universal motors-provides all of the active devices required for phase controlling the triac. (**Note that this technique does not apply to fluorescent lights; they require a more sophisticated intensity control.**) The circuit uses a cadmium-sulphide photocell as a light-**intensity sensor**. An **intensity** -varied feedback signal (lamp to cell) feeds only the ICs on-chip amplifier. (0 Refs)
Subfile: C
Descriptors: **brightness**; controllers; lamps; photoelectric cells
Identifiers: lamp output; **brightness** control
Class Codes: C3220 (Controllers); C3240D (Electric transducers and sensing devices); C3340H (Electric systems)

L52 ANSWER 29 OF 31 HCAPLUS COPYRIGHT ACS on STN
AN 1980:120707 HCAPLUS Full-text
DN 92:120707
ED Entered STN: 12 May 1984
TI **Electroluminescent and photodetecting diodes**
IN Marine, Jean; Ravetto, Michel
PA Commissariat a l'Energie Atomique, Fr.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2420848	A1	19791019	FR 1978-8522	19780323
	FR 2420848	B1	19821231		
	GB 2017404	A	19791003	GB 1979-9547	19790319
	GB 2017404	B2	19820407		
	CA 1138558	A1	19821228	CA 1979-323836	19790320
	DE 2911011	A1	19791004	DE 1979-2911011	19790321
	US 4295148	**A**	**19811013**	**US 1979-22607**	**19790321**
	JP 54130890	A2	19791011	JP 1979-34185	19790323
PRAI	FR 1978-8522		19780323		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2420848	IC	H01L031-12IC H01L033-00

AB The manufacture is described of diodes **having both electroluminescent and photodetecting properties** with a good yield, from a p-type ZnTe semiconductor. The diodes are useful for the manufacture of a screen to display and read data or to write and read data in a teletransmitting system. Thus, to form an elec. contact, a conducting layer of Al (etched as **a transparent grid**), In or Sn oxide was deposited **on the upper part of the ZnTe plate**, heated to cause the diffusion of atoms from the deposit to the plate and to form an insulating layer with a very high resistivity. The ion implantation of B in ZnTe through the conducting deposit formed a layer to trap the holes and a second insulating layer. A 2nd metal contact was formed on the opposite side of the plate.